

ABSTRACT

A video system that performs TV signal decoding, deinterlacing, and de-motion-blurring for progressive scan flat panel display is introduced. The system embeds a frame buffer and a scaler for conducting format and resolution conversions for display panels of different sizes. The output of the scaler is sent to a de-motion-blur processor for reducing the blurriness due to the motion of image objects and the slow response time of flat panel display devices. The de-motion-blur processor gets the motion and noise indication signal from scaler or the pre-frame-buffer video processor. Based on the motion and noise information and the information of temporal difference, the de-motion-blur processor performs over driving for the display panel interface and improves the rising and falling response time of the flat panel display. The decoding, deinterlacing, and de-motion-blur processing share the same frame buffer controller so the entire system can be optimized in cost and performance.